"What Is Given in the Right Way Cannot Be Forgotten"

Connecting Children, Nature and Culture by Teaching Cooperatively with Native Elders

By Heather Dewar

Their grandparents moved across the land with the seasons, traveling by dog team in winter to find caribou, fishing in the Selawik River in fall, returning from their travels to sod houses in small, scattered settlements. But now Northwest Alaska's Inupiat Eskimo people live year-round in permanent houses.

Many children in the community of Selawik, Alaska, spend months at a time without leaving their village of 900 souls, and have few chances to learn the skills that have been handed down through generations. For centuries the region's tundra, lakes and rivers provided fish and caribou to support the village's traditional subsistence culture. The land, which became part of the 2.5-million-acre Selawik National Wildlife Refuge in 1980, still provides abundant fish and game. But airplanes and satellite dishes now link the village to the wider world, and money is a necessity. Jobs are few, and Selawik's people, 95 percent of whom are Inupiat, struggle with poverty, alcoholism, and the loss of young people, who leave to find work.

The village elders wanted to keep Inupiaq traditions alive while strengthening family and community bonds. Staffers at Selawik Refuge shared that goal, said Susan Georgette, the refuge's outreach specialist. The refuge, created in 1980, encompasses 2.15 million acres of Western Arctic wilderness where native people have lived for more than 10,000 years. Refuge staffers realize they are newcomers by comparison. They see the sharing of traditional knowledge as a powerful, appropriate and respectful way to connect children with nature – and also as a way of strengthening bonds between the refuge and the community.

Village elders teach older children how to set and haul nets for whitefish.

Susan Georgette

In 2003, with the refuge's help, the village council and other partners founded the Selawik Science and Culture Camp, where elders work with refuge employees to teach the youngsters traditional hunting and fishing techniques, as well as scientific methods in wildlife biology.

Each year in mid-September when the caribou are migrating and wild berries are ripe, students take two days off from classes at the village's 240-student, kindergarten-through-12th-grade school, traveling by boat to a traditional fishing site on the refuge. The camp is part communal harvest and part outdoor classroom, where all the lessons are hands-on and scientific learning is woven into traditional teachings.

Learning to hold an ulu and a scalpel

Village elders teach older children how to set and haul nets for whitefish, the staple fish that, like salmon in other parts of Alaska, is the essential protein in villagers' diet. Meanwhile refuge staffers talk about ongoing research into the fish's life cycle, or explore the waters for aquatic insects with the younger children.

Elders and other community members take the lead, tailoring activities to the weather and the day's harvest from the land and sea. Refuge staffers consult with the elders, offering lessons and activities that support and supplement traditional teachings. For example, in a typical lesson a village woman demonstrates the use of the ulu, the woman's knife, to scale and cut a fish for drying on an open-air rack. Then a Service staffer demonstrates how the fish's gills extract oxygen from water, teaches the students how to tell its age from its scales and otoliths, and dissects the fish's internal organs. "They love the heart and the eyeballs," Georgette said.

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Students travel by boat to a traditional fishing site on Selawik National Wildlife Refuge in Alaska.

By weaving the concepts of Western science into the framework of traditional knowledge, refuge staffers convey the message that these two ways of knowing need not conflict. The children are encouraged to feel equally comfortable holding an ulu or a scalpel.

The village of Selawik runs the camp, with funding and other support from the NANA (Northwest Alaska Native Association) Regional Corporation, the Northwest Arctic Borough, the Northwest Arctic Borough School District and Selawik Refuge.

Community members built an 18-by-30-foot framed tent that is the camp's only indoor space. The U.S. Fish and Wildlife Service provided a $10,000 Challenge Cost Share grant to the tribal council, which pays the salaries of a camp manager, cooks and boat drivers, and provides honoraria for the teaching elders. The grant also covers the cost of gasoline for the boats, which in 2011 cost about $8 per gallon. The school system contributes additional labor and materials. About half of the refuge's 11 staffers participate in the camp's two-week run.

Susan Georgette

Villagers teach students how to scale and cut a fish for drying on an open-air rack. Then a Service staffer demonstrates how the fish's gills extract oxygen from water.

Inspiration, Interest and Dash of Chaos

The curriculum at the Science and Culture Camp is informal."It's very unstructured and it can seem a little chaotic to someone from the Lower 48," Georgette said, "but it's how villages teach their youth. They believe that kids will learn when they're ready to learn."

The camp is broken into four two-day sessions with 20 to 40 children in each group. The youngest students attend the first session, followed by children in grades 4-6, junior high and finally the high school students. The village school has only one class for each of the elementary grades, so the younger students and their teachers attend camp together. Junior high and high school teachers are invited to come to camp if they wish – and each year several attend, often learning traditional skills alongside their students.

On a typical day, the students meet on the riverbank for a 15-minute boat ride to the camp site. There, one group accompanies two or three adults to check the fishing nets. Other students collect buckets and go berry-picking on the tundra, learning plant identification skills along the way. Another group listens to an elder talk about the link between subsistence skills and self-respect.

The refuge team helps ensure there is enough variety in the day's activities to keep the children engaged. For example, a refuge employee may pull out print-making materials and teach the children how to make leaf prints. Refuge staffers continually try new activities. In the 2011 session, refuge employees brought along small aquatic nets and taught the elementary school students how to fish for invertebrates. Some children were fascinated and spent hours with their nets, while others quickly moved on to something different.

One activity that's always a favorite is a photo scavenger hunt, using digital cameras provided by the refuge. While snapping photos of an insect, a circle-shaped object found in nature, or a napaaqtuq (a spruce tree), the students are learning ecology, the Inupiaq language and field observation.

The unstructured approach allows the children to pursue their own interests, Georgette said. Keeping tabs on the campers is not a problem since plenty of grown-ups are on scene. With elders, teacher-observers, refuge staff, boat drivers, and cook, about 15 adults are usually in camp – and by custom, village children are allowed some freedom from constant, close adult supervision.

Being the Provider

When camp ends, community members, teachers and students gather for a potluck of caribou soup, baked and dried fish and a traditional Inupiaq dessert of whitefish eggs mixed with wild berries. The feast gives the children "the satisfaction of being the provider," Georgette said. "In northern Alaska there's a lot of cultural pride in getting food from the land."

The children who attend the camp miss two days of classroom lessons. In a district where all the schools are struggling to meet the tests' minimum academic standard, that can be a tough sell. Yet most local educators strongly support the camp, recognizing the importance of connecting students with their cultural heritage and the land.

Many of the teachers come from outside Alaska, and because of the remote setting, turnover is high. The teachers who spend time observing students and elders in the camp gain an understanding of village culture and a new insight into students' skills and learning styles, said Brittany Sweeney, Selawik Refuge's environmental education specialist. "Teachers get a chance to plug in to the outdoor classroom that is all around them, and to see how they can more effectively reach students who function better in this type of hands-on learning environment than in a classroom setting," Sweeney said.

The camp also builds understanding and respect between Selawik elders and refuge staffers as they learn from one another. "The refuge is the traditional homeland of Selawik people," Georgette said, "so in order for us to be able to do any kind of research, you have to have a good relationship with the community."

Selawik Refuge is working in other ways to support the village's effort to conserve Inupiaq culture. Georgette is compiling a list of the Inupiaq, English and scientific names for refuge songbirds. And the refuge has published two booklets researched and written by local residents. One booklet documents the historic range of the area's caribou; the other documents and explains traditional fishing methods.

As he described caribou hunting, Selawik elder David Nasragniq Greist spoke words that would make an ideal motto for Selawik's Science and Culture Camp: "What is given in the right way cannot be forgotten."

The Circle of Life

Several other Alaska refuges host or support camps that meld traditional knowledge and modern science. Since 1993, Alaska Peninsula Refuge on the state's southwestern tip has sponsored Spirit Science Camp for high school juniors and seniors from native Alutiiq villages. Using a former Bible camp as their base, as many as 10 students and five elders spend four days in September studying the mammals, birds, plants, aquatic life and geologic features of the wilderness surrounding remote Becharof Lake.

Spirit Science students learn to identify plants using the same dichotomous keys used in botany classrooms – and also learn the plant names in Alutiiq, the language of the Peninsula's native people, and their value as food and medicine. Students learn basic outdoor skills such as orienteering, the use of GPS and bear safety. "And they learn how their homeland connects to the rest of the world," said camp co-founder Orville Lind. In a region that is one of the world's richest breeding ground for migratory seabirds, "we tell them that we have shearwaters that come here from Australia, and their jaws drop."

"When we grew up our father and uncles taught us how to protect the land and the animals, so those spirits would in turn provide food and lands for us. This is the circle of life," Orville Lind said. "That is being lost...We want to resurrect that spirit, that stewardship so we can have these resources for future conservationists years from now."

Lind, a refuge ranger at Alaska Peninsula Refuge and the son of an Alutiiq chief, said the camp has four goals: to integrate traditional and Western teachings; to increase students' ecological knowledge; to give the students outdoor experiences that build skills and confidence; and to foster a sense of stewardship for the land and the wildlife it supports.

Susan Georgette

Each year in mid-September when the caribou are migrating and wild berries are ripe, it's time for the Selawik Science and Culture Camp.

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